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FILE

U.S. Department of Transportation
United States Coast Guard

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U.S. Coast Guard

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Federal Communications Commission
Office of the Secretary

Ms. Donna R. Searcy
Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Dear Ms. Searcy:

Reference: PR Docket No. 92-125 Amendment of the Aviation Services Rules (Part 87) to authorize use of the frequency 406.025 MHz for Emergency Locator Transmitters (ELTs)

1. We support this rule making. Some of the many advantages resulting from 406 MHz ELT use are: shorter pre-rescue times; fewer unresolved alerts; reduced risk to SAR forces; improved use of SAR resources; global capability; valuable coded information; easier international SAR coordination; improved accuracy; near elimination of interference problems; geostationary satellite compatibility; and potential to better standardize response procedures.

The Coast Guard is responsible for aeronautical SAR for large portions of the North Atlantic, North Pacific, Caribbean and Gulf of Mexico under the U.S. National SAR Plan, and under the Chicago Convention of the International Civil Aviation Organization (and ICAO implementing plans and documents). From 1986 through 1991 we handled 1,715 aeronautical distress cases in these maritime areas (less than 10% of U.S. total), most of which were severe. These cases resulted in 726 lives being saved (about 30% of U.S.total), 697 lives lost before notification, and 262 lives lost after notification. Overall, 85% of aviation crashes and ditchings in the U.S. involve survivors, many more of whom could be saved if response times could be shortened. We feel that typical response times would be greatly improved by use of 406 MHz ELTs. These cases represent only a small part of the potential lives that can be saved by 406 MHz ELTs since most aviation distress cases occur over land.

It is important that dependence upon 121.5 MHz ELTs be decreased. Although some lives are saved by them, the overall effect of their use is actually detrimental to safety. In the U.S. alone, about 2500 121.5 MHz false alerts are received for every alert involving an actual aviation emergency. This is due partly to ELT deficiencies and partly due to problems inherent in the use of the 121.5 MHz frequency band for ELTs. This deplorable situation is made much worse by prevalence of aviation emergencies during which 121.5 MHz ELTs are known not to activate. Therefore, continued use of 121.5 MHz ELTs should not be authorized any longer than absolutely necessary.

A recent (very conservative) study conducted for the Interagency Committee on Search and Rescue indicates that even if 121.5 MHz ELTs conforming to the FAA's Standard C91 were all replaced with C91a ELTs, at least nine more lives would be lost annually than would be the case if the ELTs operated on 406 MHz.

2. In this Notice you asked for specific comments relating to the requirements for an integral 121.500 MHz homing beacon. The Coast Guard supports a requirement for a 121.5 MHz locating signal for 406 MHz ELTs. In cases of distress, the SAR forces must have the capability of quickly and precisely locating the distressed aircraft under all conditions. Although the 406 MHz ELT position from the COSPAS-SARSAT system is almost an order of magnitude better than from a 121.5 MHz ELT, this 2 - 5 mile location accuracy represents a considerable search area. Therefore, the ability to home on the ELT is of great importance. At present, equipment to home on 121.5 MHz is widely used and readily available; equipment to home on the short burst/low duty cycle 406 MHz signal is neither widely used or readily available.

Because of the considerable number of non-Government resources involved in assisting SAR forces, and the varied equipment used, modification of all of these equipments -- or replacement -- is not practical or feasible. Therefore, the incorporation within the 406 MHz ELT of a 121.5 MHz homing beacon that these non-Government (as well as Government) forces are presently equipped to use is essential. We urge that a 121.5 MHz homing beacon be required as an integral part of the 406 MHz ELT.

3. You also asked for comments concerning requirements for certification by an independent laboratory versus the Commissions's type acceptance process. In general, the testing requirements of an ELT can be divided in two parts; tests to ensure compatibility with the satellite system (i.e., COSPAS-SARSAT type approval) and tests of the additional electrical and environmental requirements (e.g., RTCA/DO-204). We believe that all 406 MHz distress beacons should receive COSPAS-SARSAT type approval in accordance with the COSPAS-SARSAT 406 MHz Distress Beacon Type Approval Standard (C/S T.007). This COSPAS-SARSAT type approval testing is performed at an independent testing laboratory and will ensure that the ELT is compatible with the satellite system. We believe that the remaining testing (additional electrical and environmental) should also be performed by an independent laboratory. The 406 MHz ELT testing requirements would follow the same general testing requirements required for the 406 MHz satellite EPIRBs. We believe that requirements of independent laboratory testing for EPIRBs has resulted in a much more reliable life saving device.

4. Finally, you asked if registration should be made mandatory, and if so, what enforcement might be contemplated if beacons are not registered. We strongly recommend that registration of all 406 MHz beacons in the database maintained by NOAA be made mandatory. It is essential that SAR authorities have ready access to this information to facilitate an effective and efficient response to distress alerts and to quickly resolve false alarm incidents that needlessly tie up SAR assets. A variety of efforts are underway to educate the public on the importance of registration. Enforcement need only be accomplished through referral of false alarm reports of unregistered beacons to the Commission.

Sincerely,

Joseph D. Hersey, Jr.
Chief, Maritime Radio & Spectrum
Management Division
By direction